REMARKS

This application has been reviewed in light of the Office Action dated November 21, 2003. Claims 1, 3-11, 30-33, 35-37, 39-45, 47, and 48 are pending in this application. Claims 2, 34, 38, and 46 have been cancelled, without prejudice or disclaimer of subject matter.[1] Claims 1, 10, 11, 33, 37, and 45, which are the independent claims, have been amended to define still more clearly what Applicants regard as their invention. Claims 7, 9, 30, and 31 have been amended as to matters of form only and those amendments do not, in any way, narrow the scope of any of those claims. Claims 35 and 47 have been amended to depend from Claims 33 and 45, respectively. Favorable reconsideration is requested.

Claim 33-36 and 45-48 were rejected under 35 U.S.C. § 112, first paragraph, as lacking written description. Claims 33 and 45 have been amended to clarify that the monitoring of the test signal occurs without requiring a conversion to or from non-optical form outside of the optical node. It is submitted that this claimed feature is more than adequately described in the specification. For example, Fig. 7 shows a configuration in which the monitoring of a test signal occurs without conversion of the signal to non-optical form outside of the optical node (e.g., 80). Accordingly, Applicants believe that the rejection under Section 112, first paragraph, has been obviated, and its withdrawal is therefore respectfully requested.

Claims 1, 2, 8, 11, 37, 38, and 44 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 6,108,113 (Fee); Claims 1, 3-6, 37, and 39-42 as anticipated by U.S. Patent No. 5,265,096 (Parruck); and Claims 1, 10, 30-36, and 45-48 as anticipated by U.S. Patent No. 6,452,701 (Terahara et al.). Claims 7, 9, and 43 were

[1] Claims 12-29 were previously cancelled.

rejected under 35 U.S.C. § 103(a) as being unpatentable over Fee in view of U.S. Patent No. 6,504,630 (Czarnocha et al.).

Cancellation of Claims 2, 34, 38, and 46 renders their rejections moot.

The aspect of the present invention set forth in Claim 1 is a wavelength division multiplexed optical system. The system has a first optical node including a transponder having a test signal generator for generating a test signal. The test signal generator is adapted to output an error frame or a valid frame for use as the test signal. A second optical node includes a transponder having a monitoring circuit for monitoring a received test signal. A light path is provided through which at least optical communications normally are exchanged between the first and second optical nodes. The light path is tested by the monitoring circuit monitoring a bit error rate of the test signal in response to receiving the test signal from the first optical node through the light path.

Claim 1 has been amended herein to incorporate the subject matter of Claim 2, which was rejected as anticipated by Fee. Specifically, Claim 1 has been amended to recite that the light path is tested by the monitoring circuit monitoring a bit error rate of the test signal. Applicants will therefore address the patentability of Claim 1 with respect to Fee.

One notable feature of amended Claim 1 is that the test signal generator is adapted to output an error frame or a valid frame for use as the test signal.

Fee is understood to relate to a method and system for transporting ancillary network data by superimposing a sub-carrier modulation signal on a high bit-rate data signal. As shown in Fig. 9, which is relied on in the Office Action, the ancillary data is input to a modulated signal generator, which provides a modulated output signal to be combined with a high bit-rate data signal. According to Fee, the ancillary data may carry

various types of information, such as link identifiers, wavelength utilization tables, and customer identifiers (see col. 13, lines 5-28). However, nothing has been found in Fee that teaches or suggests a test signal generator, much less a test signal generator that is adapted to output an error frame or a valid frame for use as the test signal, as recited in Claim 1.

Accordingly, Applicants submit that Claim 1 is patentable over Fee.

Independent Claim 11 includes the same feature of a test signal generator that is adapted to output an error frame or a valid frame for use as a test signal, as discussed above in connection with Claim 1. Likewise, independent Claim 37 recites that the test signal comprises a predetermined error frame or a predetermined valid frame for use as the test signal. Accordingly, Claims 11 and 37 are believed to be patentable over Fee for at least the same reasons as discussed above in connection with Claim 1.

Claims 1 and 37 were also rejected over Parruck, which relates to ways of generating and transmitting SONET alarm signals. However, Parruck is not thought to teach or suggest a test signal generator that is adapted to output an error frame or a valid frame for use as the test signal, in the manner of Claims 1 and 37. Moreover, cancelled Claim 2, the subject matter of which has been incorporated into Claims 1 and 37, was not rejected over Parruck in the Office Action. For at least these reasons, Claims 1 and 37 are each believed to be clearly patentable over Parruck.

Claim 33, which was rejected over Terahara et al., has been amended to incorporate the subject matter of Claim 34, which has been cancelled. Claim 33 recites, *inter alia*, an optical node having a receiving portion arranged to receive a test signal from a transmitting portion through an optical path, and to monitor a quality of the test signal received through the optical path by measuring a bit error rate, without requiring a conversion of the test signal to or from a non-optical form outside of the optical node,

wherein the optical path includes at least one loopback mechanism which directs the generated test signal transmitted by the transmitting portion towards the receiving portion.

Terahara et al. relates to a wavelength division multiplexing communication network in which a supervisory signal is transmitted between nodes. While Terahara et al. describes using the supervisory signal to check optical fibers using optical time-domain reflectometer (OTDR) measurements, nothing has been found in Terahara et al. that teaches or suggests monitoring a quality of a test signal received through the optical path by measuring a bit error rate via a loopback configuration, as recited in Claim 33.

Accordingly, Applicants submit that Claim 33 is patentable over Terahara et al..

Independent Claim 45 includes the same feature of monitoring a quality of a test signal received through the optical path by measuring a bit error rate, as discussed above in connection with Claim 33. Accordingly, Claim 45 also is believed to be patentable over Terahara et al. for at least the same reasons as discussed above in connection with Claim 33.

Claims 1 and 10 were also rejected over Terahara et al., however, that reference is not thought to teach or suggest a test signal generator that is adapted to output an error frame or a valid frame for use as the test signal, in the manner recited in Claims 1 and 10. Moreover, cancelled Claim 2, the subject matter of which has been incorporated into Claims 1 and 10, was not rejected over Terahara et al. in the Office Action. Accordingly, Claims 1 and 10 also are believed to be patentable over Terahara et al.

A review of the other art of record, including Czarnocha et al., has failed to reveal anything that, in Applicants' opinion, would remedy the deficiencies of the art

discussed above, as applied against the independent claims herein. Therefore, those claims are respectfully submitted to be patentable over the art of record.

The other rejected claims in this application depend from one or another of the independent claims discussed above, and, therefore, are submitted to be patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

This Amendment After Final Action is believed to place this application in condition for allowance and, therefore, its entry is believed proper under 37 C.F.R. § 1.116. Accordingly, entry of this Amendment After Final Action, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, it is respectfully requested that the Examiner contact Applicants' undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,

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